Int. J. Pres. Ves. & Piping **54** (1993) 545–547

Contents of Volume 54

Numbers 1 & 2

Special Issue: Safety Assessment of Pressure Vessels

Introductory Remarks 3
J. FORSTEN (Finland)

Phenomena of Material Degradation with Time Relevant to Reactor Pressure Vessels 9
H. HANNINEN (Finland)

Review of Thermal Ageing Data and Its Application to Operating Reactor Pressure Vessels 31
I. A. VATTER, C. A. HIPPSLEY & S. G. DRUCE (UK)

Approach and Methodology for Condition Assessment of Thermal Reactor Pressure Vessels 49
C. A. ENGLISH, A. J. FUDGE, R. J. MCELROY, W. J. PHYTHIAN, J. T. BUSWELL, C. J. BOLTON, P. J. H. HEFFER, R. B. JONES & T. J. WILLIAMS (UK)

Charpy Specimen Reconstitution as a Means of Providing Data for Plex Licencing Purposes 89
W. VANDERMEULEN, A. FABRY, J. L. PUZZOLANTE, J. VAN DE VELDE, TH. VAN RANSBEEK & E. VAN WALLE (Belgium)

Neutron Fluence Determination and Uncertainty Analysis 99
F. B. K. KAM, C. Z. SERPAN, F. W. STALLMAN & M. L. WILLIAMS (USA)

Inspection Performance with a View to Pressure Vessel Life Management . . . 107
S. CRUTZEN & P. JEHENSON (Italy)

Review of the State of the Art in the Assessment of Material Degradation with Time 137
K. KUSSMAUL & J. FOHL (Germany)

Pressure Vessel Steel Surveillance Program: Developments, Experience Feedback and Perspectives 157
B. BARTHELET, C. BRILLAUD, C. PICHON & C. RIEG (France)

Low Temperature Embrittlement of LWR RPV Support Structures 171
R. J. MCELROY, T. J. WILLIAMS, F. M. D. BOYDON & B. HEMSWORTH (UK)

Int. J. Pres. Ves. & Piping (**54**) (1993)—© 1993 Elsevier Science Publishers Ltd, England. Printed in Northern Ireland

Reactor Pressure Vessel Functionality Issues and the Development of a Low Temperature Overpressurization Transient Limit for Precluding Crack Initiation . 213
P. J. HIJECK, B. R. GANTA & D. J. AYRES (USA)

NEA/CSNI Workshop on the Safety Assessment of Reactor Pressure Vessels . . 231
A. PELLISSIER-TANON, J. VAGNER & S. BHANDARI (France)

Flux Reduction and other Mitigation Measures for RPVS 259
R. AHLSTRAND (Finland)

The Philosophy and Technical Bases of Current Regulatory Requirements Regarding Material Degradation with Time 267
C. Z. SERPAN, JR & K. R. WICHMAN (USA)

A Regulatory View of Irradiation Embrittlement 279
F. M. D. BOYDON & B. HEMSWORTH (UK)

APWR Pressure Vessel Safety Assessment 293
R. A. NOËL (France)

A Procedure for Assessing the Life of Pressurized Water Reactor Pressure Vessels 317
V. N. SHAH & W. L. SERVER (USA)

Reliability Assessment by Aid of Probabilistic Fracture Mechanics 341
F. NILSSON (Sweden)

Summary and Conclusions of the Workshop on the Safety Assessment of Reactor Pressure Vessels 353
K. TORRONEN (Finland), C. A. ENGLISH (UK), S. CRUTZEN (Italy), B. HEMSWORTH (UK) & C. NOËL (France)

Number 3

Cyclic Behavior of a Pipe Section Subjected to Bending, Ovalization or Torsion Loads in the Case of a Perfectly Plastic Material 363
G. LI & M. N. BERTON (France)

Large Amplitude Free Vibrations of Cylindrical Shell on Pasternak Foundations 387
D. N. PALIWAL & V. BHALLA (India)

A new J-Integral Estimation Scheme and Its Relation to Existing Schemes . . . 399
E. SMITH (UK)

Measurement of Crack Propagation Velocity in Nuclear Pressure Vessel Steel (SA516 gr. 70) 415
O. S. LEE & M. K. HAN (South Korea)

A Model of the Hysteresis Loop Caused by Internal Friction 429
K. GOLOŚ (Poland)

Probabilistic Fracture Mechanics Analysis of a Nuclear Pressure Vessel for Allocation of In-Service Inspection 435
P. DILLSTRÖM, F. NILSSON, B. BRICKSTAD & M. BERGMAN (Sweden)

Optimal Support Radius of Loose-Fitting Saddle Support 465
L. S. ONG & G. LU (Singapore)

Characterization of Irradiation-Induced Embrittlement in an ASTM A 203D Steel Using Instrumented Impact Testing 481
S. K. RAY, P. R. SREENIVASAN, K. G. SAMUEL & P. RODRIGUEZ (India)

Effect of Temperature on the Threshold Fatigue Crack Growth Behaviour of Spheroidal Graphite Cast Iron 497
J. H. BULLOCH (Ireland)

Reliability of Surface Inspection Techniques 523
P. KAUPPINEN & J. SILLANPÄÄ (Finland)

The Extent to which Credit can be Taken for the Increased Toughness Associated with Shallow Cracks in PTS Probabilistic Fracture Mechanics Analyses 535
E. SMITH (UK)

Announcements 543